

Sierra L. Grant

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Education

Boston University <i>PhD</i> Advisor: Catherine C. Espaillat	Boston, MA <i>Current</i>
Boston University <i>Master of Arts</i> Advisor: Catherine C. Espaillat	Boston, MA 09/2015–05/2017
University of Michigan <i>B.S. Astronomy & Astrophysics and B.S. Interdisciplinary Physics</i> Advisor: Nuria P. Calvet	Ann Arbor, MI 09/2011–05/2015

Research Interests

I study protoplanetary disks which are disks of gas and dust that surround young stars and are the birth places of exoplanets. Specifically, I focus on accretion from the disk onto the central star and how populations of disks evolve. I use models and observations, with data from space-based (including *Spitzer* and *Herschel*) and ground-based telescopes (including the Lowell Discovery Telescope, Gemini South, NASA's IRTF, and ALMA) to characterize protoplanetary disk evolution.

Honors and Awards

2020	ALMA Student Observing Support (\$33,148)
Fall 2015	Dean's Fellowship
Fall 2011, 2013, & Spring 2014	University Honors

Presentations

12/2018	Star and Planet Formation Lunch Talk, Amherst, MA – Invited Talk
07/2018	Cool Stars 20, Boston, MA – Poster
01/2018	The 4th MA-CT Regional Star Formation Meeting, Boston, MA – Contributed Talk
12/2017	Boston Area Exoplanet Science Meeting, Cambridge, MA – Contributed Talk
01/2017	Regional Star Formation Meeting, New Haven, CT – Contributed Talk
06/2015	Frontiers in Star Formation: Celebrating Contributions to the Field by Nuria Calvet and Lee Hartmann, Ann Arbor, MI – Invited Talk
01/2015	225th American Astronomical Society Meeting, Seattle, WA – Poster
02/2014	Scientista Symposium, Massachusetts Institute of Technology, Cambridge, MA – Poster
2013, 2014, & 2015	Undergraduate Research Presentation, University of Michigan, Ann Arbor, MI – Poster

Publications

- 01/2019 *"Using Multiwavelength Variability to Explore the Connection among X-Ray Emission, the Far-ultraviolet H₂ Bump, and Accretion in T Tauri Stars"*
C. C. Espaillat, C. Robinson, **S. Grant**, M. Reynolds
ApJ, 876, 121
- 08/2018 *"Herschel Observations of Protoplanetary Disks in Lynds 1641"*
Sierra L. Grant, Catherine C. Espaillat, S. Thomas Megeath,
Nuria Calvet, William J. Fischer, Christopher J. Miller,
Kyoung Hee Kim, Amelia M. Stutz, Álvaro Ribas, Connor E. Robinson
ApJ, 863, 13
- 03/2014 *"A Month of Personal Transformation at Kitt Peak"*
Sierra L. Grant
NOAO Newsletter, Issue 109, March 2014

Accepted Observing Proposals

As PI:.....

- 2020 Gemini South Observatory (17 hours in 2020A, 7.7 hours in 2020B)
"Accretion onto Intermediate-mass Stars"
Sierra Grant, Catherine Espaillat, Sean Brittain, Nuria Calvet
- 2019 ALMA (Cycle 7, 2019.1.00951.S)
"Characterizing Protoplanetary Disks in the Orion L1641 Region"
Sierra Grant, Catherine Espaillat, Kyoung Hee Kim, Enrique Macías,
Álvaro Ribas, Tom Megeath, Nuria Calvet, John Tobin
- 2019 & 2020 NASA Infrared Telescope Facility (3 half-nights each in 2019B and 2020A)
"Accretion onto Intermediate-mass Stars"
Sierra Grant, Catherine Espaillat, Sean Brittain, Nuria Calvet
- 2017 & 2018 Lowell Discovery Telescope, Lowell Observatory (10 half-nights)
"Probing Gas and Dust in the Sites of Planet Formation"
Sierra Grant, Catherine Espaillat

As Co-I:.....

- 10/2017 *Hubble Space Telescope* (6 orbits) & *Chandra X-ray Observatory* (35ks) &
VLA (9.6 hours)
"Connecting Mass Accretion and Ejection in Pre-main Sequence Stars"
Catherine Espaillat, Jesús Hernández, **Sierra Grant**, Enrique Macías,
Mark Reynolds, Connor Robinson
- 10/2015 *Spitzer Space Telescope* (Proposal ID #12036)
"Footprints of the Magnetosphere: the Star-Disk Connection in T Tauri
Stars"
Catherine Espaillat, **Sierra Grant**, Jesus Hernandez, Nuria Calvet
Coordinated with the *Hubble Space Telescope* and the The Neil Gehrels
Swift Observatory for simultaneous observations

Affiliations and Outreach

09/2015 – Current	Women as Leaders in Astronomy (Boston University)
09/2015 – Current	Boston University Astronomy Public Open Nights
09/2018 – 05/2019	Letters to a Pre-Scientist Pen Pal
09/2011 – 05/2015	Student Astronomical Society
09/2011 – 05/2012	Douglass Houghton Scholars Program
09/2011 – 05/2012	Women in Science and Engineering Residency Program
06/2010	Michigan Technological University Women in Engineering Program

Leadership

09/2018 – Current	Women as Leaders in Astronomy Organizer
09/2018 – 08/2019	Graduate Student Representative

Mentored Students

Caleb Scott-Joseph (06/2018 – 08/2019): Caleb was a high school student at Boston University Academy who I mentored to analyze high-resolution, near-infrared spectra of protoplanetary disks.

Workshops

12/2017	JWST Proposal Planning Workshop, Pasadena, CA
03/2016	NRAO Live! ALMA Proposal Workshop at Boston University, Boston, MA

Teaching

Spring 2016	AS 203: Principles of Astronomy II Teaching Assistant
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